

Amendments to the Claims

1. (Currently amended) A process for treating sea water ~~containing dissolved salts selected from the group consisting of calcium sulfate, calcium chloride, magnesium sulfate, magnesium chloride, sodium carbonate, sodium chloride, sodium sulfate, calcium carbonate, and mixtures thereof~~ comprising

(A) adding to said sea water about 0.1 to about 60 g/L of a compound selected from the group consisting of sodium hydroxide, sodium carbonate, potassium hydroxide, potassium carbonate, calcium hydroxide, calcium carbonate, aluminum hydroxide, aluminum sulfate, aluminum potassium sulfate, and mixtures thereof, whereby a precipitate of a calcium compound forms in said water;

(B) separating said precipitate from said water; and

(C) desalinating said water.

2. (Currently amended) A process according to Claim 1 wherein prior to step (A) said sea water is filtered.

3. (Currently amended) A process according to Claim 1 wherein said sea water is desalinated using reverse osmosis.

4. (Currently amended) A process according to Claim 1 wherein said sea water is desalinated using flash evaporation.

5. (Original) A process according to Claim 1 wherein said solid precipitate is separated by filtration.

6. (Currently amended) A process according to Claim 1 wherein desalinating said sea water produces a first stream that has a lower concentration of dissolved solids and a second stream that has a higher concentration of dissolved solids, and

(A) (1) a mixture is formed of said second stream and said sea water ~~containing dissolved salts~~;

(B) (2) if the concentration of said compound in said mixture is less than about 0.1 wt%, a sufficient amount of said compound is added to said mixture to bring its concentration within a range of about 0.1 to about 60 wt%; and

(C) (3) said mixture is recycled to step (B).

7. (Currently amended) A process according to Claim 1 wherein acid is added to said sea water after step (B) to lower the pH of said sea water to between about 6.5 and about 8.5.

8. (Currently amended) A process according to Claim 7 wherein the pH of said sea water is adjusted before step (C).

9. (Original) A process according to Claim 1 wherein said compound is selected from the group consisting of calcium oxide, calcium hydroxide, sodium hydroxide, sodium carbonate, and mixtures thereof.
10. (Original) A process according to Claim 1 wherein the amount of said compound is about 0.2 to about 40 g/L.
11. (Original) A process according to Claim 1 wherein said desalinating is performed at a temperature in excess of 70°C.
12. (Cancelled)
13. (Cancelled)
14. (Currently amended) A process according to Claim ~~43~~ 1 wherein said compounds are added in two steps, a first step in which about 0.04 to about 40 g/L of calcium hydroxide, calcium oxide, or a mixture ~~there-of~~ thereof is added, whereby a first precipitate is formed and is separated from the water, and a second step in which about 0.1 to about 60 g/L of sodium carbonate and about 0.04 to about 40 g/L of sodium hydroxide, or a mixture thereof is added, whereby a second precipitate is formed and is separated from the water.

15. (Currently amended) A process for treating sea water to reduce the concentration of dissolved salts therein comprising

(A) adding to said sea water about 0.04 to about 40 g/L of a compound selected from the group consisting of calcium hydroxide, calcium oxide, and mixtures thereof, whereby a first precipitate that comprises calcium hydroxide is formed;

(B) separating said first precipitate from said water;

(C) adding to said water about 0.01 to about 60 g/L sodium carbonate and about 0.04 to about 40 g/L sodium hydroxide, whereby a second precipitate that comprises magnesium hydroxide is formed;

(D) separating said second precipitate from said water; and

(E) desalinating said water using reverse osmosis.

16. (Currently amended) A process according to Claim 15 wherein, in step (A), said compound is calcium oxide ~~is added~~.

17. (Original) A process according to Claim 16 wherein the amount of said calcium oxide added is about 0.07 to about 30 g/L, the amount of said sodium carbonate added is about 0.12 to about 50 g/L, and the amount of said sodium hydroxide added is about 0.9 to about 34 g/L.

18. (Currently amended) A process for treating sea water to reduce the concentration of dissolved salts therein comprising

(A) adding to said sea water about 0.4 to about 40 g/L of a compound selected from the group consisting of calcium hydroxide, calcium oxide, and mixtures thereof, whereby a first precipitate that comprises calcium hydroxide is formed;

(B) separating said first precipitate from said water;

(C) adding to said water about 0.1 to about 60 g/L sodium carbonate and about 0.04 to about 40 g/L sodium hydroxide , whereby a second precipitate that comprises magnesium hydroxide is formed;

(D) separating said second precipitate from said water; and

(E) desalinating said water using flash evaporation.

19. (Original) A process according to Claim 18 wherein, in step (A), said compound is calcium oxide ~~is added~~.

20. (Original) A process according to Claim 19 wherein the amount of said calcium oxide added is about 0.07 to about 30 g/L, the amount of said sodium carbonate added is about 0.12 to about 50 g/L, and the amount of said sodium hydroxide added is about 0.9 to about 34 g/L.

21. (New) A process according to Claim 15 wherein desalinating said sea water produces a first stream that has a lower concentration of dissolved solids and a second stream that has a higher concentration of dissolved solids, and

(1) a mixture is formed of said second stream and said sea water;

(2) if the concentration of said compound in said mixture is less than about 0.4 g/L, a sufficient amount of said compound is added to said mixture to bring its concentration within a range of about 0.4 to about 40 g/L; and

(3) said mixture is recycled to step (C).

22. (Currently amended) A process according to Claim 18 wherein desalinating said sea water produces a first stream that has a lower concentration of dissolved solids and a second stream that has a higher concentration of dissolved solids, and

(1) a mixture is formed of said second stream and said sea water;

(2) if the concentration of said compound in said mixture is less than about 0.4 g/L, a sufficient amount of said compound is added to said mixture to bring its concentration within a range of about 0.4 to about 40 g/L; and

(3) said mixture is recycled to step (C).